



Complete Summary

TITLE

Nuclear medicine - radionuclide bone imaging: percentage of final reports for all patients, regardless of age, undergoing bone scintigraphy that include physician documentation of correlation with existing relevant imaging studies (e.g., x-ray, MRI, CT) that were performed.

SOURCE(S)

Society of Nuclear Medicine (SNM), Physician Consortium for Performance Improvement®. Nuclear medicine: radionuclide bone imaging physician performance measurement set. Chicago (IL): American Medical Association; 2008 Feb 29. 14 p. [6 references]

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of final reports for all patients, regardless of age, undergoing bone scintigraphy that include physician documentation of correlation with existing relevant imaging studies (e.g., x-ray, magnetic resonance imaging [MRI], computed tomography [CT]) that were performed.

RATIONALE

Radionuclide bone imaging plays an integral part in tumor staging and management; the majority of bone scans are performed in patients with a diagnosis of malignancy, especially carcinoma of the breast, prostate gland, and

lung. This modality is extremely sensitive for detecting skeletal abnormalities, and numerous studies have confirmed that it is considerably more sensitive than conventional radiography for this purpose. However, the specificity of bone scan abnormalities can be low since many other conditions may mimic tumor; therefore, it is important that radionuclide bone scans are correlated with available, relevant imaging studies. Existing imaging studies that are available can help inform the diagnosis and treatment for the patient. Furthermore, correlation with existing radiographs is considered essential to insure that benign conditions are not interpreted as tumor. While there are no formal studies on variations in care in how often correlation with existing studies is not performed, there is significant anecdotal information from physicians practicing in the field that there is a gap in care and that correlation is not occurring frequently when images are available.

Literature suggests that as many as 30% of Radiology reports contain errors, regardless of the imaging modality, Radiologist's experience, or time spent in interpretation. Evidence has also suggested that Radiology reports are largely non-standardized and commonly incomplete, vague, untimely, and error-prone and may not serve the needs of referring physicians. Therefore, it is imperative that existing imaging reports be correlated with the Nuclear Medicine bone scintigraphy procedure to ensure proper diagnosis and appropriate patient treatment.

The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:

Bone scintigraphic abnormalities should be correlated with appropriate physical examination and imaging studies to ascertain that osseous or soft-tissue abnormalities, which might cause cord or other nerve compression or pathologic fracture in an extremity, are not present. (Society of Nuclear Medicine [SNM], 2003)

Relevant radiographs and/or magnetic resonance (MR) imaging of painful sites to exclude cord compression or severe lytic lesions which carry an increased risk of pathologic fracture should be examined by the physician. (SNM, 2003)

PRIMARY CLINICAL COMPONENT

Nuclear medicine; radionuclide bone imaging; bone scintigraphy; final report; documentation of correlation with existing relevant imaging studies

DENOMINATOR DESCRIPTION

All final reports for patients, regardless of age, undergoing bone scintigraphy (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

NUMERATOR DESCRIPTION

Final reports that include physician documentation of correlation with existing relevant* imaging studies (e.g., x-ray, magnetic resonance imaging [MRI], computed tomography [CT], etc.)

*Relevant imaging studies are defined as studies that correspond to the same anatomical region in question.

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Unspecified

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Internal quality improvement
National reporting

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care
Hospitals

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

All ages

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Unspecified

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

All final reports for patients, regardless of age, undergoing bone scintigraphy

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

All final reports for patients, regardless of age, undergoing bone scintigraphy

Exclusions

System reason for not documenting correlation with existing relevant imaging studies in final report (e.g., no existing relevant imaging study available*, patient did not have a previous relevant imaging study)

*Correlative studies are considered to be unavailable if relevant studies (reports and/or actual examination material) from other imaging modalities exist but could not be obtained after reasonable efforts to retrieve the studies are made by the interpreting physician prior to the finalization of the bone scintigraphy report.

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Diagnostic Evaluation
Encounter

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Final reports that include physician documentation of correlation with existing relevant* imaging studies (e.g., x-ray, magnetic resonance imaging [MRI], computed tomography [CT], etc.)

*Relevant imaging studies are defined as studies that correspond to the same anatomical region in question.

Exclusions

None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Encounter or point in time

DATA SOURCE

Administrative data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Measure #1: correlation with existing imaging studies for all patients undergoing bone scintigraphy.

MEASURE COLLECTION

MEASURE SET NAME

[Nuclear Medicine: Radionuclide Bone Imaging Physician Performance Measurement Set](#)

SUBMITTER

American Medical Association on behalf of the Physician Consortium for Performance Improvement® and Society of Nuclear Medicine

DEVELOPER

Physician Consortium for Performance Improvement®
Society of Nuclear Medicine

FUNDING SOURCE(S)

Unspecified

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FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

Conflicts, if any, are disclosed in accordance with the Physician Consortium for Performance Improvement® conflict of interest policy.

ENDORSER

National Quality Forum

INCLUDED IN

Physician Quality Reporting Initiative

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2008 Feb

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

Society of Nuclear Medicine (SNM), Physician Consortium for Performance Improvement®. Nuclear medicine: radionuclide bone imaging physician performance measurement set. Chicago (IL): American Medical Association; 2008 Feb 29. 14 p. [6 references]

MEASURE AVAILABILITY

The individual measure, "Measure #1: Correlation with Existing Imaging Studies for All Patients Undergoing Bone Scintigraphy," is published in the "Nuclear Medicine: Radionuclide Bone Imaging Physician Performance Measurement Set." This document and technical specifications are available in Portable Document Format (PDF) from the American Medical Association (AMA)-convened Physician Consortium for Performance Improvement® Web site: www.physicianconsortium.org.

For further information, please contact AMA staff by email at cqi@ama-assn.org.

NQMC STATUS

This NQMC summary was completed by ECRI Institute on February 24, 2009. The information was verified by the measure developer on April 13, 2009.

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